

Comments on Proposed Interim Remedial Action Plan
at Public Hearing on Hillside 881

November 9, 1989

Kim R. Grice

D.O.E. and its contractors at Rocky Flats have not been very nice neighbors! They have polluted the groundwater and soil at their facility to the extent that remedial action is necessary to protect the public from added health risks. The public deserves to be informed that this is not a cleanup operation of hazardous waste; it is only an interim solution to keep the contamination at these sites from spreading.

After a comprehensive review of the 881 IRA, I find it technically deficient in fully addressing many aspects of public concern.

- 1) The IRA mentioned that RFP is located in a rural area where there was no schools, no hospitals, and no parks within 5 miles of the RFP site. This comment is grossly in error! The facts are that there exists 20 schools, a hospital called 'Avista' in Louisville, 11 child care centers, and over 14 parks and public open-space areas within 5 miles from the boundary of Rocky Flats. The map shown in figure 2-1 is not an updated map. It also blocks out major development areas east of RFP, and Broomfield is omitted completely. It is recommended that a detail map showing current development, schools, hospitals, parks, etc. within a 10 mile radius of the RFP boundary be incorporated into this IRA. The population census in this report uses outdated 1980 data, when with a little effort current population figures could easily be obtained from county & city records.
- 2) There is very little mention in this IRA regarding Soil characterization. There is much concern that this remediation project will disturb soils contaminated with varying levels of plutonium and other radionuclides. (see HUD's RF Advisory Notice attached). The resuspension of respirable size dust containing radioactive elements could have direct health impacts on citizens residing & working downwind when these particulates are inhaled or ingested. As noted in attached chart, there has been an escalation of airborne contamination during past soil excavations at RFP. The excavation

requires 2100 feet of French Drain & 1320 feet of Slurry Walls that are 4-20 feet deep. Excavation also includes over 2500 feet of effluent piping trenches and the excavation & encapsulating 86,000 sq.ft. of contaminated soil. We are not informed of the total amount of soil (cu.yds.) that will be excavated at these sites. Much of the proposed remedial area contains large quantities of plutonium contamination of the soil (see attached Krey & Hardy map). A complete chemical and radionuclide soil characterization for specific construction sites has not been performed and included in this IRA, why? Will the proposed sites be tested for total amount of respirable size particulates to determine the amount of airborne dust that could be resuspended during construction? How many cubic yards of soil will be removed from the borrowed site south of Womans Creek; and what will be its characterization? What safety precautions are planned for the workers? What will be the health risks to the public during the remedial actions? It is recommended that a closed environmental chamber be used to conduct any excavation within, in order to limit & filter resuspended contaminants before release to the outside environment.

- 3) The IRA needs to include a comprehensive site specific ambient air monitoring plan. Meteorological data pertinent to these sites is needed to determine direction & distance, etc. that this respirable dust might travel. According to a 1987 Meteorological Tracer Study published in Sept. 1988 by Rockwell, the distribution of emission plumes can be dynamic. The report mentions that during the 12 day study, tracer elements traveled west to the Continental Divide and as far East as 45 miles from the release site located near the 903 Pad. It was interesting to note that during the tests, the plume was in contact with the ground. Sector #2 which is south east of the RFP, according to the Colorado Dept. of Health, continually reports the highest levels for Plutonium in soils (see CDH map & chart attached).
- 4) Other comments that relate to the 881 IRA Plan are as follows:
 - A) Deficiency in characterizing extent of soil & groundwater contamination:
 - Vertical/Horizontal profile (3 dimensional) of extent of the groundwater plume should be characterized and included
 - There are no wells north of the SWMU's

- Existing soil data does not characterize adequately the current status of the contaminated area.

B) Radioactive Ambient Air Monitoring Program is Deficient

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Closing Remarks

While it makes sense to attempt to confine the spread of groundwater contamination in order to reduce added health risks imposed on the public; we should also be concerned about the daily emissions of radiotoxic waste from over 50 vents at this facility, and the subsequent inhalation/ingestion of these carcinogens by our family and friends.

(DISINTEGRATIONS PER MINUTE/GRAM OF DRY SOIL)

1971.

RFP-ENV-71B

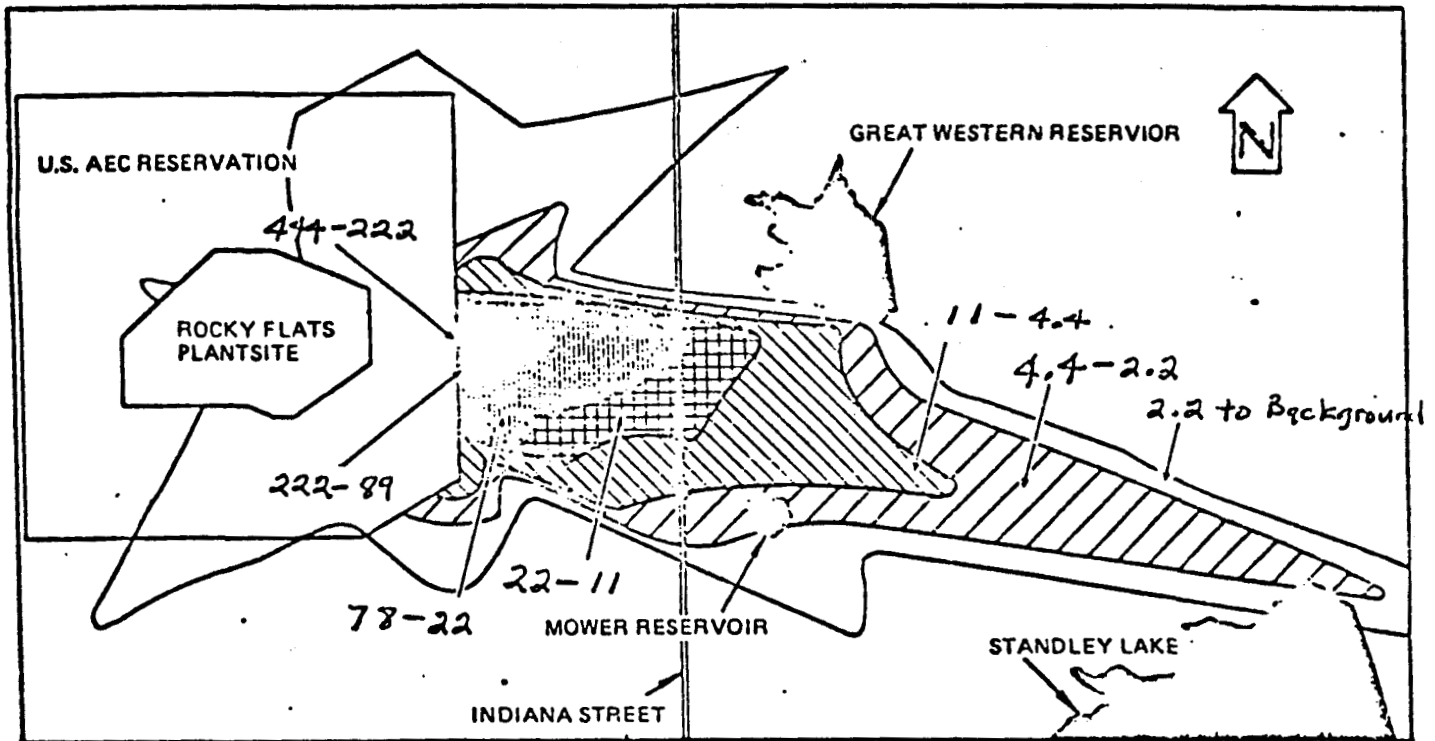


Table X. Surface Soil Analysis: off-site contours.

NOTE: These contours were empirically derived by means of a computer curve-fitting program using the method of least squares. This results in a mathematical expression for grid sectors, giving the activity of the plutonium in the soil as a function of radial distance from the on-site barrel-storage area. Three hundred forty-two soil samples were used in generating these contours. Eighteen samples were taken by the Colorado Committee on Environmental Information, 18 by U.S. AEC Health and Safety Laboratory, 306 by the Rocky Flats Health Physics Department. The values assume a soil density of 1 g/cm^3 at a depth of one centimeter.

* THIS DOW DOCUMENT SHOWS DEFINITELY THAT RFP CONTAMINATION IS OFFSIGHT, HAS SPREAD SIGNIFICANTLY.

LIVING WITHIN A RADIOACTIVE FALLOUT ZONE

Portions of Westminster, Broomfield, and Arvada are Contaminated!



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

REGIONAL/AREA OFFICE
EXECUTIVE TOWER - 1405 CURTIS STREET
DENVER, COLORADO 80202

REGION VIII

March 1, 1979

IN REPLY REFER TO:

8RF-1

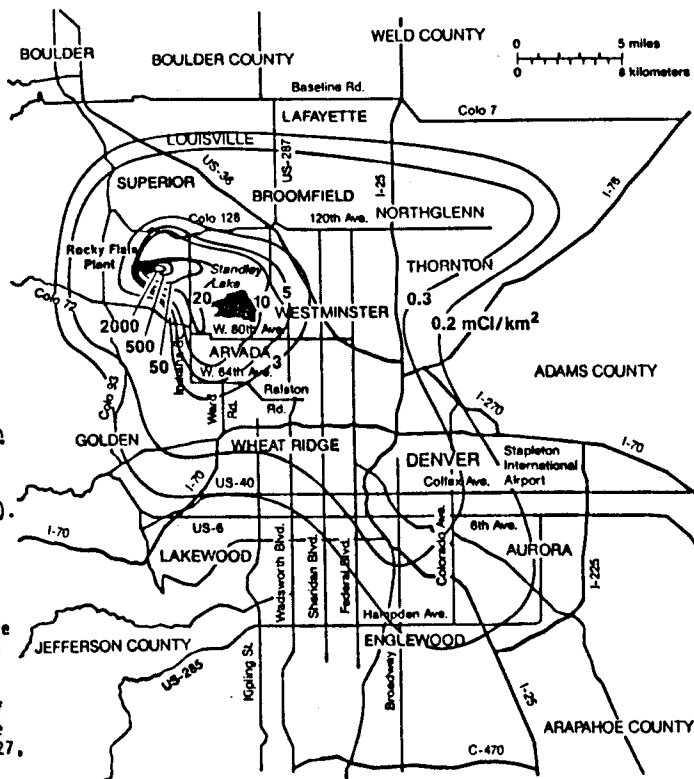
ROCKY FLATS ADVISORY NOTICE

This notice is to inform you of certain facts regarding the United States Department of Energy Rocky Flats Plant which is located within ten miles of your prospective residence.

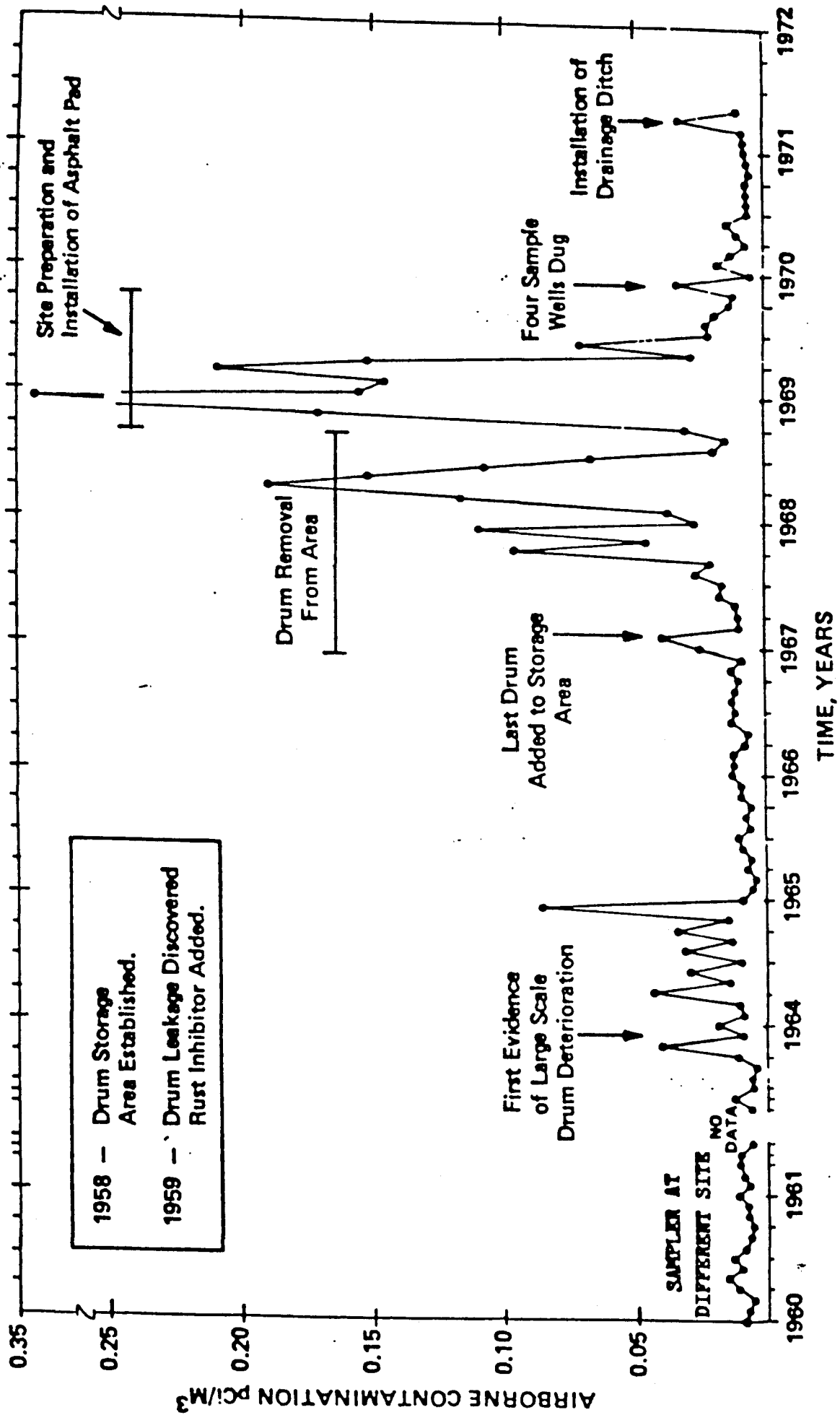
You should be aware that there exist within portions of Boulder County, and Jefferson County, Colorado, varying levels of plutonium contamination of the soil. However, according to the information supplied by the Department of Energy, the soil contamination in the area in which your prospective residence is located is below the limits of the applicable radiation guidance developed by the Environmental Protection Agency (EPA). Therefore, it has been determined by the EPA that this particular area may be used without restrictions.

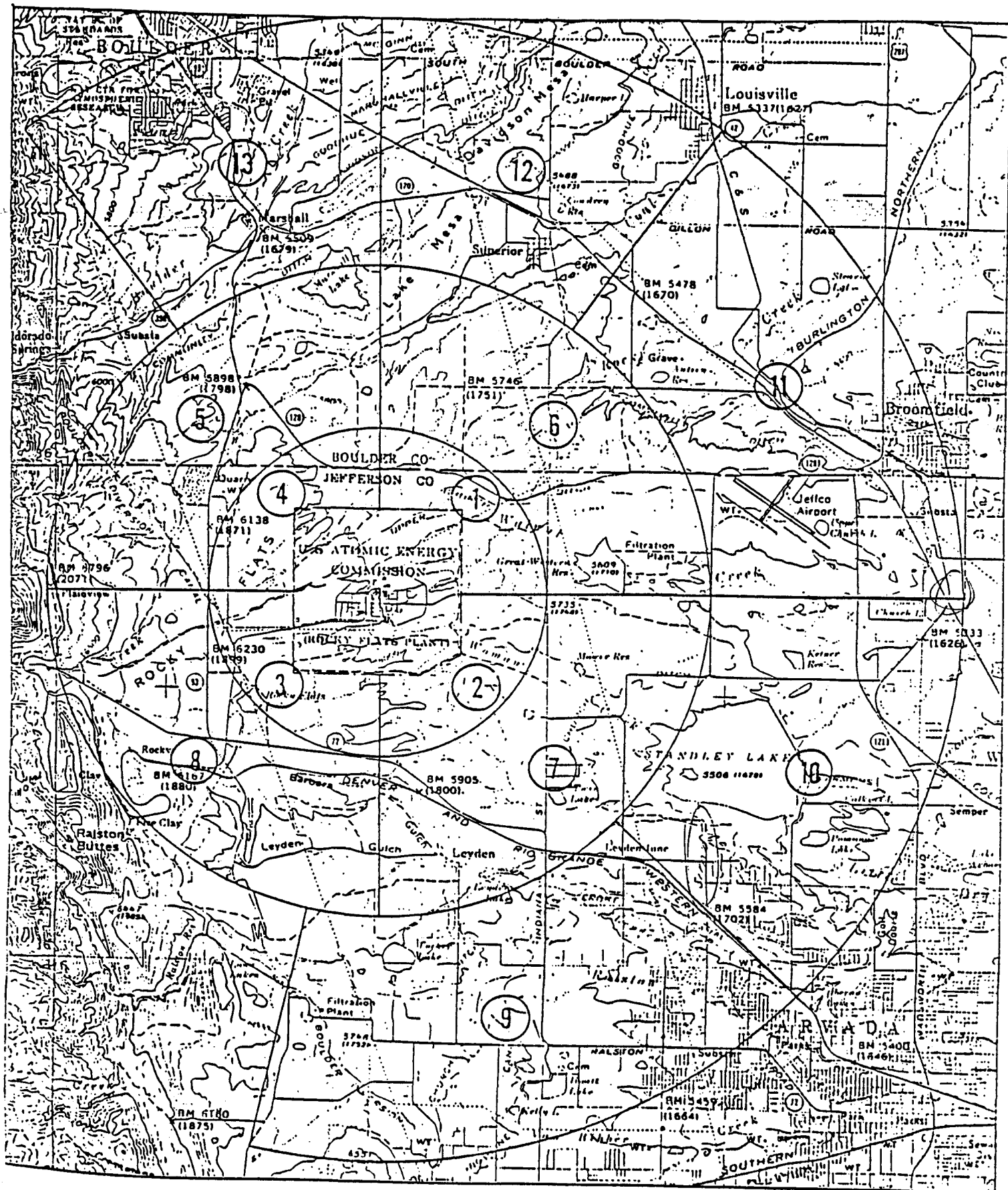
You should also be aware of the existence of the Colorado Radiological Emergency Response Plan for Rocky Flats developed by the Colorado Department of Military Affairs. This plan establishes certain protective actions to be taken in the event of an accidental release of radioactive materials from the Rocky Flats Plant. Your prospective residence lies within the area covered by the Radiological Emergency Response Plan. A copy of this plan may be reviewed at the State of Colorado Department of Health, 4210 East 11th Avenue, Denver, Colorado 80220, or at the office of the Rocky Flats Monitoring Committee, State Capitol Building, Room 127, 200 E. Colfax Avenue, Denver, Colorado 80203. Copies of this plan should also be available at the city and county offices, as well as the Environmental Protection Agency, 1860 Lincoln, Denver, Colorado 80203, and the Department of Housing and Urban Development.

DISPERSION OF ROCKY FLATS PLUTONIUM



P.W. Krey, Remote Plutonium Contamination and Total Inventories From Rocky Flats, Health Physics 30:209-14: (1976)





ROCKY FLATS PLANT SURVEILLANCE

Pu 239 + 240 Concentrations in Soil (dpm/gm)

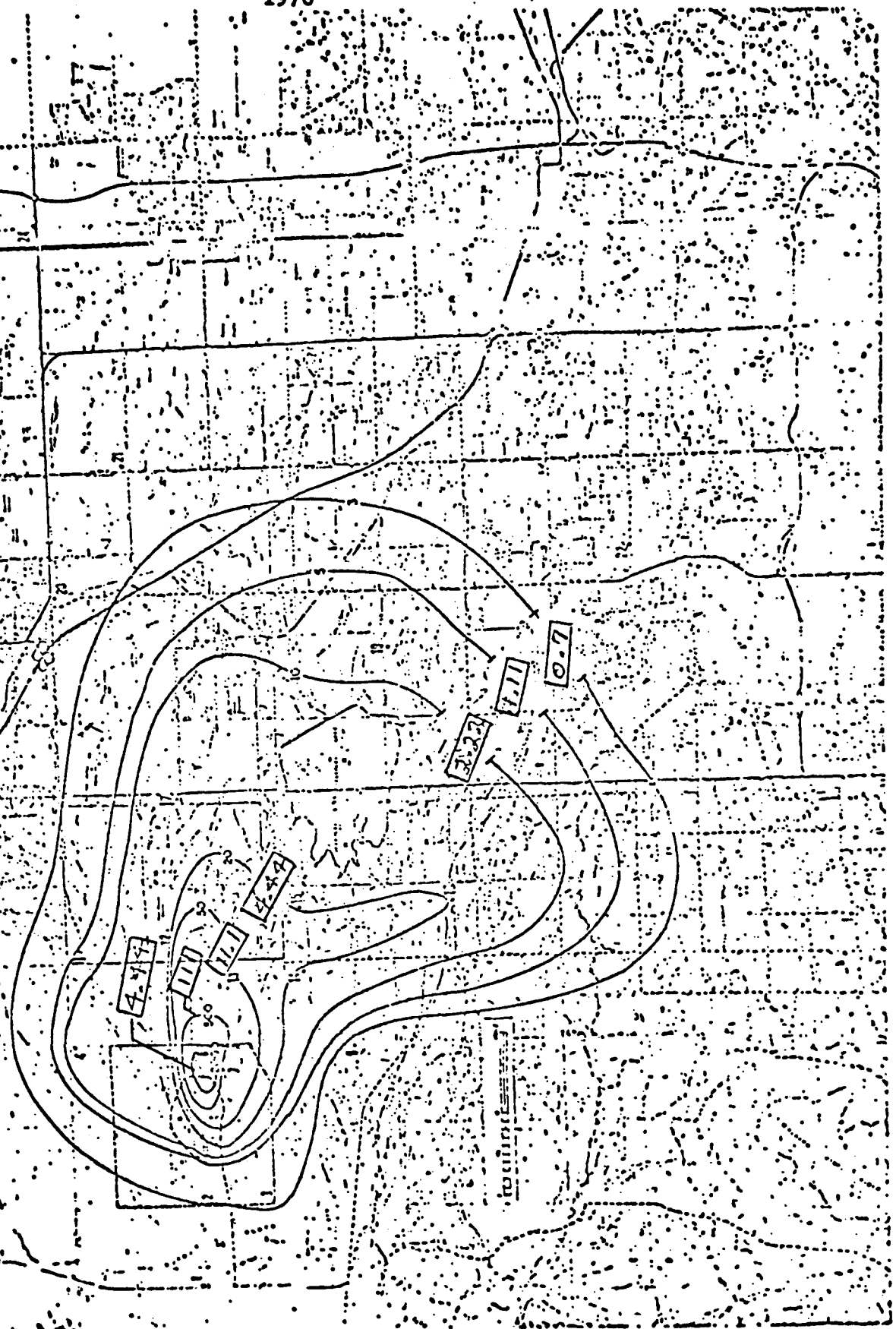
Immediate Vicinity Sector	1986	1985-1982	1981	1980	1979	1978	1977
1	0.57	--	<0.18	0.69	--	--	2.28
2	3.28	--	4.88	6.93	--	--	9.37
3	<0.04	--	0.60	0.24	--	--	0.22
4	0.35	--	0.27	0.18	--	0.20	0.20
5	0.09	--	<0.18	0.09	--	0.11	0.13
6	0.09	--	0.31	0.09	--	--	0.66
7	<0.04	--	0.53	0.73	--	0.56	0.64
8	0.07	--	<0.18	0.09	--	0.13	0.16
9	<0.02	--	0.33	0.29	--	0.07	0.13
10	<0.11	--	1.15	0.04	--	--	0.22
11	<0.15	--	<0.18	0.04	--	--	0.07
12	<0.09	--	<0.18	0.04	--	--	0.06
13	<0.18	--	--	<0.02	--	<0.07	0.07

Remote Samples	1986	1985-1982	1981	1980	1979	1978	1977
Loveland	<0.04	--	*	--	--	<0.04	0.02
Live more	<0.04	--	*	--	--	0.04	<0.02
Crooke	<0.02	--	*	--	--	0.07	0.04
Burlington	<0.02	--	*	0.04	--	<0.04	0.07
Limon	<0.07	--	*	0.04	--	<0.04	0.04
Springfield	<0.09	--	*	0.04	--	0.27	0.02
Walsenburg	<0.04	--	*	--	--	<0.04	0.04
Penrose	<0.04	--	*	--	--	0.13	0.04

CAT 6/87 (SITE STANDARD IS 2 d/m/g)

1970

PLUTONIUM-239 CONTOURS



*The AEC's plutonium-239 contours are for millicuries per square kilometer. These values have been converted to disintegrations per minute per gram of soil as if all of the plutonium could be found in the top centimeter of soil. This is not what has been observed by the AEC so the values given may be in error on the high side.